

REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

1. Entry of Amendments–New Issues

Claim 5 is now specifically directed to the embodiment of Figs. 3 and 4, which include outwardly facing poles and an outer rotor, while claim 6 is specifically directed to the embodiment of Figs. 5-7, which includes inwardly facing poles and an inner rotor.

Because the claims continue to be directed to the inclusion of a magnetic combination member (on the outside in claim 5 and on the inside in claim 6) together with the magnetic ring or plates that facilitate coupling with the magnetic combination member, it is respectfully submitted that the amendments to claims 5 and 6 do not raise new issues or necessitate a new search, and entry and consideration of the amendments is respectfully requested.

2. Rejection of Claim 5 Under 35 USC §103(a) in view of U.S. Patent Nos. 5,945,765 (Chen) and 5,847,485 (Suzuki)

This rejection is respectfully traversed on the grounds that the Chen and Suzuki patents fail to disclose or suggest a stator that includes at least two pole plates having poles that face an *inner* rotor, *outer* magnetically conducting rings on the pole plates, and an *outer* combination member made of a magnetically conductive material, as recited in claim 5.

As noted by the Examiner, the Chen patent discloses an outer rotor and no combination member. While some embodiments of the motor disclosed in the Suzuki patent include a soft magnetic chassis 1 that encompasses the stator and therefore might be interpreted as a combination member (although the chassis of Suzuki does not isolate the stator from other components of the motor, as claimed), there is no teaching or suggestion in Suzuki that the chassis 1 could be used in connection with a motor of the type disclosed

in Chen, in which the rotor is outside the pole plates. Therefore, the proposed combination of the Chen and Suzuki patents appears to be improper.

Instead of suggesting modification of the outer-rotor motor of Chen to include the claimed magnetic ring and combination member, Suzuki teaches that when the chassis 1 is used in connection with an outer rotor, as illustrated in Fig. 7 of the Suzuki patent, the chassis 1 should not only encompass the pole plates, but also the rotor itself, *in which case there is no possible need for a magnetic ring of the type claimed*. In other words, according to Fig. 7 of Chen, if one were to combine the chassis of Suzuki with a motor of the type disclosed in the Chen patent, the result would not be a combination member, as claimed, for mechanically and magnetically connecting the pole plates, but rather a chassis extending around the outer rotor as well as the pole plates, and failing to connect the pole plates mechanically or magnetically.

Chassis 1 of Suzuki therefore does not serve as a “combination member” in the manner of the claimed invention, *i.e.*, a member that not only houses but connects the pole plates, both mechanically and magnetically, and the Suzuki patent could not have suggested modification of the motor of Chen to include such a connection member. As a result, withdrawal of the rejection of claim 5 under 35 USC §103(a) based on the Chen and Suzuki patents is respectfully requested.

3. Rejection of Claims 6-8 Under 35 USC §103(a) in view of U.S. Patent Nos. 4,891,567 (Fujitani), 4,381,465 (Renkl), 5,917,262 (Huang), and 6,466,119 (Drew)

This rejection is respectfully traversed on the grounds that the Fujitani, Renkl, Huang, and Drew patents all fail to disclose or suggest a stator that includes at least two pole plates having poles that face an *outer* rotor, *inner* magnetically conducting plates, and an *inner* combination member made of a magnetically conductive material, as claimed.

The Fujitani patent discloses two pole plates 28,29 fitted onto a coil support, and a magnetic “shorting” ring or member 301,60,62 extending between the pole plates, as illustrated in Figs. 12-16. However, the pole plates of the embodiments that include the shorting member do not include any inner magnetically conducting plates corresponding to the claimed inner magnetically conducting plates.

The lack of inner magnetically conducting plates combined with an inner combination member is not made up for by:

- the Renkl patent, which discloses an inner rather than outer rotor and no combination member;
- the Huang patent, which discloses a non-magnetic bearing 1 rather than an inner magnetic combination member, and poles that fail to face an outer rotor; or
- the Drew patent, which discloses a magnetic particle clutch which does not include pole pieces, a magnetic combination member, or an outer rotor.

None of these secondary references discloses an outer rotor, an inner combination member, and inner magnetically conducting plates that facilitate magnetic coupling of the pole plates to the inner combination member, and thus none could possibly have suggested modification of the outer rotor motor of Fujitani to combine an inner combination member with pole plates having outwardly facing poles *and* inner magnetically conducting plates mounted in the central pole of the coils set, as claimed.

Because the Fujitani, Renkl, Huang, and Drew patents fail to disclose or suggest, whether considered individually or in any reasonable combination, a stator structure in which the poles plates are magnetically coupled together by a magnetically conductive combination member, the pole plates having inner magnetically conducting plates to facilitate coupling to the magnetically conductive combination member to increase the torque without complicating assembly, withdrawal of the rejection under of claims 6-8 under 35 USC §102(b) is respectfully requested.

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Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

BACON & THOMAS, PLLC

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